

The use of dynamic training and survival physiology.

It is my belief that this departments training division is unaware of how the body reacts in a life threatening situation. In a life threatening situation the body reacts by visual narrowing, auditory exclusion, and decreased fine motor skills.

Our departments firearm training is conducted in a static, nonthreatening, low stress environment on the gun range and class room, using what psychologist call closed motor skill training. Such training exercises are predictable, planned, static, and low stress. A common example is traditional firearms qualification on the gun range in which officers fire only on command at identical paper targets that do not return fire. Techniques that look or feel effective in this type of environment often have little or no application in a stressful, dynamic, real-world environment.

SURVIVAL STRESS MANAGEMENT

The departments trainers must understand survival physiology and survival stress management techniques to help officers improve their decision making skills in deadly force situations. When faced with a survival situation, the human body experiences involuntary physiological reactions that affect performance of motor skills. Many of these reactions have a negative impact on officers ability to defend themselves in life or death struggles.

Motor skills combine cognitive processes and physical actions to enable a person to perform physical tasks, such as firing a weapon. There are three types of motor skills-gross, fine, and complex.

Gross motor skills involve the action of large muscles groups, such as those found in the thighs, chest, back and arms. These skills depend on strength and improve under high stress conditions due to the body's release of adrenaline and other hormones. Survival stress has little or no negative effect on these skills.

Fine motor skills use small muscle groups, such as the hands and the fingers. These skills frequently involve eye hand coordination, such as shooting a firearm. They require low or nonexistent levels of stress for optimum performance. Fine motor skills rapidly deteriorate under survival stress conditions.

Complex motor skills in corporate multiple components, often involving eye hand coordination, timing, tracking a moving target, and balance. To achieve optimal performance of these skills stress levels must be low. Therefore, the high stress encountered in a survival situation reduces an officers ability to perform complex motor skills.

During a deadly force encounter, unprepared or poorly trained officers experience a chain reaction of escalating stress that increases their heart rates. As the heart rate rises, fine and complex motor skills deteriorate rapidly, resulting in an inability to handle a weapon. FOR EXAMPLE. The rising heart rate also triggers the body's sympathetic nervous system, which is part of the autonomic nervous system that controls breathing and other involuntary life functions. The sympathetic system secretes powerful hormones, such as adrenaline, epinephrine, and similar substances that increase heart rate and blood pressure and regulate body metabolism under life threatening stress. The body redirects blood away from the fingers, hands, and extremities to major muscles, such as the chest, thighs, and arms. Hand dexterity and coordination drastically decline as blood vessels constrict.

Eye sight also is affected by increased stress. The contour of the lenses of the eyes change, making visual tracking or focusing on near by objects, such as the front sight of a weapon, difficult or even impossible. Perceptual narrowing occurs and affects depth perception, often causing officers to fire shots low. Peripheral vision nearly vanishes as the field of view reduces to 12 to 18 inches. Because most threats are processed through a person's visual sense, the tremendous reduction in visual input severely restricts the brain's ability to receive and process vital information. Research has shown that when peripheral vision decreases 70%, it takes a person 440% more time to react.

If a officer's rising heart rate remains unchecked, a survival stress response called "hypervigilance" occurs. With hypervigilance, the officer freezes in place or engages in inappropriate or irrational actions in a panic or near panic condition. This condition is characterized by an indiscriminate attention to inappropriate threat cues as an officer frantically searches for a way to escape the danger. Commonly, officers experiencing hypervigilance might repeatedly pull the trigger of an empty weapon, or not see or hear innocent bystanders in the line of fire. One of the keys to managing survival stress is controlling heart rate. Research has proven that a slight increase in heart rate in response to stress stimuli improves performance. However additional stress and increased heart rate causes rapid deterioration of performance. Cognitive skills begin to deteriorate at heart rates above 155 (BPR), and perceptual narrowing, hypervigilance, and irrational behavior begin at 175 BPR. Officers experience full blown hypervigilance at heart rates between 200 and 225 BPM. The optimal heart rate for combat performance is between 115 and 145 BPM. Teaching officers stress management techniques that enable them to keep their heart rates in or near this range will help them control survival stress.

DYNAMIC TRAINING

Practice through realistic simulation offers one of the best ways to prepare officers to handle deadly force decisions. This training strategy integrates classroom instruction on policies and decision making models with open motor skills training to enable officers to apply their knowledge in dynamic, stressful situations that approximate real life.

Purpose

Dynamic training serves two purposes in improving the decisions officers make during deadly force situations. It allows them to implement survival stress management techniques in conjunction with effective tactics and procedures in a realistic environment, and it meets higher training standards imposed by recent court decision.

The dynamic training technique uses role playing scenarios that pit officers against live adversaries who think, plan, interact, move, use cover, and return fire. Dynamic training allows officers to apply survival stress management and safety and survival tactics in an open motor skills environment within the parameters of the law. Open motor skills training conducted in a fluid, reactive, spontaneous, stressful environment adds realistic decision making to the instructional setting.

Dynamic training provides another benefit: It often identifies performance deficiencies not spotted in other forms of training. One agency found that, in spite of continuous emphasis on the importance of decocking semiautomatic sidearms equipped with decock mechanisms, the overwhelming number of participants under survival stress failed to do so before reholstering their weapons following a shooting scenario. With this knowledge, trainers could take steps to address this dangerous performance issue.

Stimulus Conditioned Response

For officers to survive deadly force encounters, their responses must demand a minimal outlay of physical or mental energy. This quick response can be learned when training combines a stimulus in the form of recognizing specific threats or threat cues with a conditioned response. Officers learned to respond automatically when the stimulus occurs.

Tactical Breathing

Finally, officers can use tactical breathing to govern their survival responses. This technique helps them control their heart rates and avoid full activation of the sympathetic nervous system. By bringing more oxygen into their systems, they lower their heart rates, which improves perceptual abilities and reduces anxiety.

CONCLUSION

The primary goal of any law enforcement training is to increase officers safety and effectiveness, when they handle enforcement activities effectively, danger levels decrease. Proper training also reduces an agency's exposure to liability claims and expensive litigation. Instruction in survival physiology and survival stress management, and realistic, dynamic training exercises can improve officers' confidence levels and enhance their decision making skills.

Law enforcement officers must make split second life or death decisions. Agencies can demonstrate their concerns for the rights of their citizens and the safety of their employees by preparing officers to make the best choices possible.